

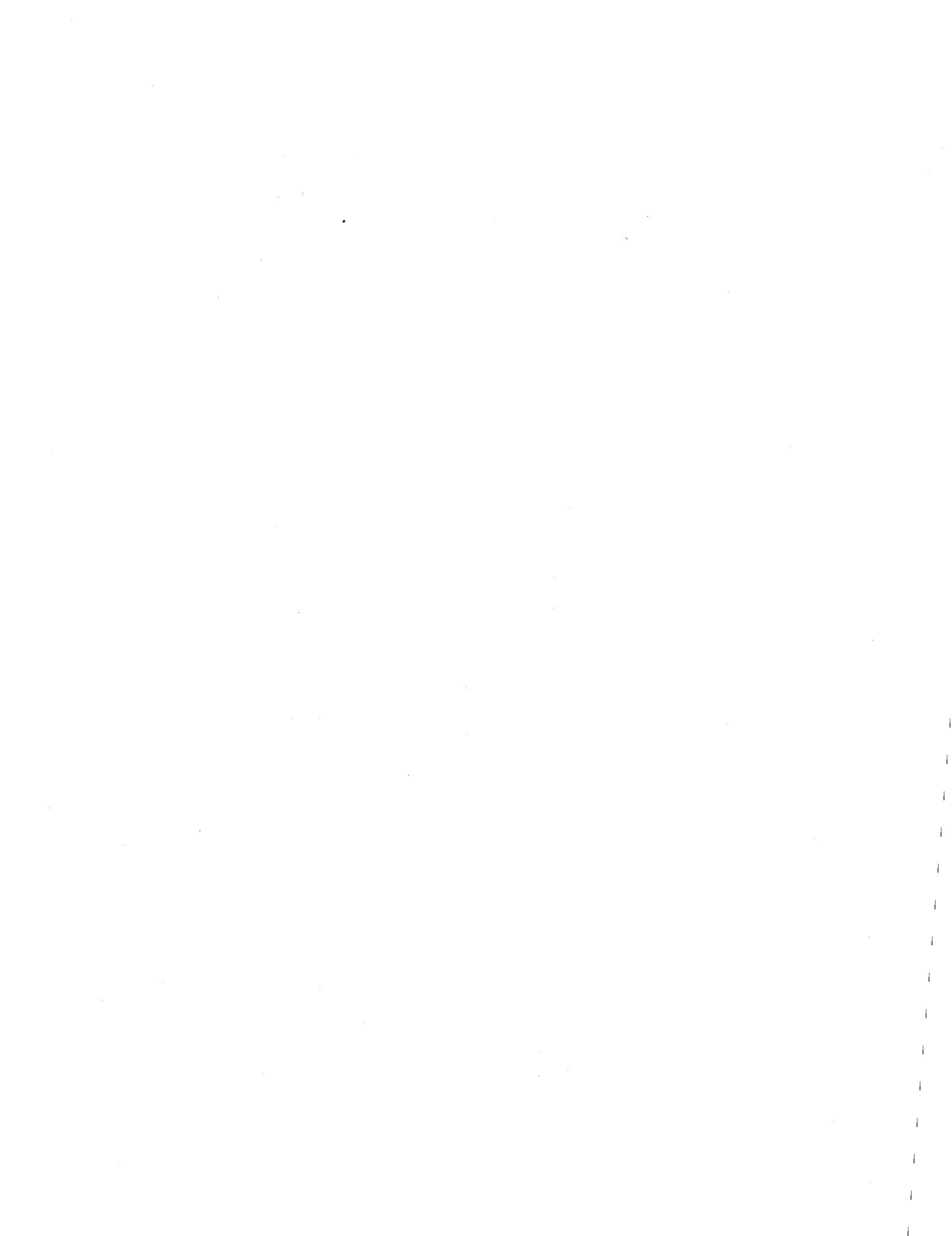


DRINKING WATER REGULATIONS AND HEALTH ADVISORIES



PB96-164900





DRINKING WATER REGULATIONS AND HEALTH ADVISORIES

by

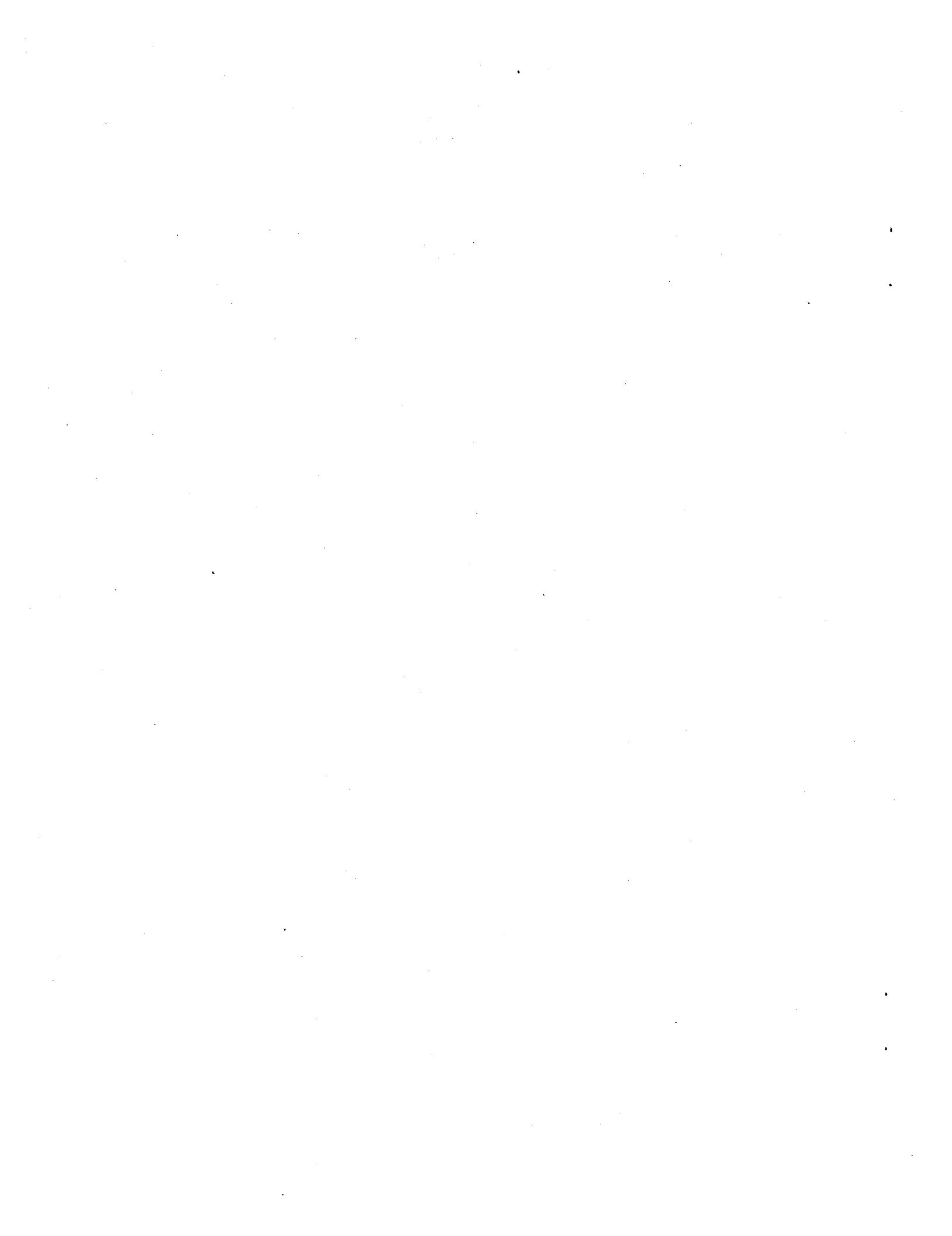
**Office of Water
U.S. Environmental Protection Agency
Washington, D.C.**

February 1996

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REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this burden to Washington Headquarters Services, Directorate for Information Operations and Reports, 121 Jefferson Avenue SW, Washington, DC 20409.

PB96-164900



2. REPORT DATE

3. REPORT TYPE AND DATES COVERED

4. TITLE AND SUBTITLE

DRINKING WATER REGULATIONS AND HEALTH ADVISORIES

5. FUNDING NUMBERS

6. AUTHOR(S)

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

OFFICE OF SCIENCE & TECHNOLOGY
OFFICE OF WATER (4301)
U.S. ENVIRONMENTAL PROTECTION AGENCY
401 M STREET, S.W.
WASHINGTON, D.C. 20460

8. PERFORMING ORGANIZATION
REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)

10. SPONSORING/MONITORING
AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT

12b. DISTRIBUTION CODE

13. ABSTRACT (Maximum 200 words)

14. SUBJECT TERMS

15. NUMBER OF PAGES

16. PRICE CODE

17. SECURITY CLASSIFICATION
OF REPORT18. SECURITY CLASSIFICATION
OF THIS PAGE19. SECURITY CLASSIFICATION
OF ABSTRACT

20. LIMITATION OF ABSTRACT

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std. Z39-18
298-102



These regulations and health advisory tables are revised every 6 months by EPA's Office of Water. Although no permanent mailing list is kept, copies may be ordered free of charge from the:

SAFE DRINKING WATER HOTLINE

1-800-426-4791

Monday thru Friday, 9:00 AM to 5:30 PM EST.

Copies of the supportive technical documentation for the health advisories can be obtained for a fee from the:

Educational Resource Information Center (ERIC)

1929 Kenny Road

Columbus, OH 43210-1080

Telephone number (614) 292-6717

FAX (614) 292-0263

e-mail ERICSE@osu.edu

Payment by Purchase Order/check/Visa or Mastercard.

The Health Advisories available and their ERIC order numbers are included at the end of this publication. For further information regarding the Drinking Water Regulations and Health Advisories, call Barbara Corcoran in EPA's Office of Water at (202) 260-1332.

LEGEND

Abbreviations column descriptions are:

- MCLG** - Maximum Contaminant Level Goal. A non-enforceable concentration of a drinking water contaminant that is protective of adverse human health effects and allows an adequate margin of safety.
- MCL** - Maximum Contaminant Level. Maximum permissible level of a contaminant in water which is delivered to any user of a public water system.
- RfD** - Reference Dose. An estimate of a daily exposure to the human population that is likely to be without appreciable risk of deleterious effects over a lifetime.
- DWEL** - Drinking Water Equivalent Level. A lifetime exposure concentration protective of adverse, non-cancer health effects, that assumes all of the exposure to a contaminant is from a drinking water source.

(*) The codes for the Status Reg and Status HA columns are as follows:

- F** - final
D - draft
L - listed for regulation
P - proposed
T - tentative (*not officially proposed*)

Other codes found in the table include the following:

- NA** - not applicable
PS - performance standard 0.5 NTU - 1.0 NTU
TT - treatment technique
- **** - No more than 5% of the samples per month may be positive. For systems collecting fewer than 40 samples/month, no more than 1 sample per month may be positive.
- ***** - guidance
- Large discrepancies between Lifetime and Longer-term HA values may occur because of the Agency's conservative policies, especially with regard to carcinogenicity, relative source contribution, and less-than-lifetime exposures in chronic toxicity testing. These factors can result in a cumulative UF (uncertainty factor) of up to 5 to 5000 when calculating a Lifetime HA.

The scheme for categorizing chemicals according to their carcinogenic potential is as follows: *

Group A: Human carcinogen

Sufficient evidence in epidemiologic studies to support causal association between exposure and cancer

Group B: Probable human carcinogen

Limited evidence in epidemiologic studies (Group B1) *and/or* sufficient evidence from animal studies (Group B2)

Group C: Possible human carcinogen

Limited evidence from animal studies and inadequate or no data in humans

Group D: Not classifiable

Inadequate or no human and animal evidence of carcinogenicity

Group E: No evidence of carcinogenicity for humans

No evidence of carcinogenicity in at least two adequate animal tests in different species *or* in adequate epidemiologic and animal studies

Drinking Water Health Advisories (HAs) are defined as follows:

One-day HA

The concentration of a chemical in drinking water that is not expected to cause any adverse noncarcinogenic effects for up to 5 consecutive days of exposure, with a margin of safety.

Ten-day HA

The concentration of a chemical in drinking water that is not expected to cause any adverse noncarcinogenic effects up to 14 consecutive days of exposure, with a margin of safety.

Long-term HA

The concentration of a chemical in drinking water that is not expected to cause any adverse noncarcinogenic effects up to approximately 7 years (10% of an individual's lifetime) of exposure, with a margin of safety.

*EPA is in the process of revising the Cancer Guidelines.

Lifetime HA

The concentration of a chemical in drinking water that is not expected to cause any adverse noncarcinogenic effects over a lifetime of exposure, with a margin of safety.

Drinking Water Standards and Health Advisories

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Chemicals	Standards				Health Advisories						
	Status Req.	MCL (mg/L)	MCL Status HA	10- 40 CMAQ	10- 40 CMAQ	Longer- term (mg/L)	Rm. (mg/L day)	Rm. (mg/L day)	Lifetime (mg/L)	max. at 10- 40 CMAQ	Cancer Group
ORGANICS											
Aceanthrene	-	-	F	-	-	-	-	-	0.06	-	-
Acfidofen	T	zero	TT	F	2	0.1	0.4	0.13	0.4	0.1	B2
Acrylamide	F	zero	TT	F	1.5	0.3	0.02	0.0002	0.007	-	B2
Acrylonitrile	T	zero	D	-	-	-	-	-	-	-	B1+
Adipate (diethylhexyl)	F	0.4	0.4	-	20	20	60	0.8	20	0.4	C
Alachlor	F	zero	0.012	F	0.1	0.1	-	0.01	0.4	0.04	B2
Aldicarb**	D	0.007	0.007	D	-	-	-	0.001	0.035	0.007	D
Aldicarb sulfone**	D	0.007	0.007	D	-	-	-	0.001	0.035	0.007	D
Aldicarb sulfoxide**	D	0.007	0.007	D	-	-	-	0.001	0.035	0.007	D
Alum	-	-	-	F	9	9	3	0.009	0.3	0.06	D
Ammonium sulfamate	-	-	-	F	20	20	60	0.28	8	2	D
Anthracene (PAH)***	-	-	-	-	-	-	-	0.3	-	-	D
Aniline	F	0.003	0.003	F	0.1	0.05	0.2	0.005	0.2	0.003*	C
Baygon	-	-	-	F	0.04	0.04	0.04	0.1	0.004	0.1	C
Benzacan	T	0.02	-	F	0.3	0.3	0.3	0.020	0.10	0.03	D
Benz(a)anthracene (PAH)	-	-	-	-	-	-	-	-	-	-	B2
Benzene	F	zero	0.003	F	0.1	0.1	-	-	-	0.1	A
Benz(a)pyrene (PAH)	F	zero	0.002	-	-	-	-	-	-	0.0002*	B2*
Benz(b)fluoranthene (PAH)	-	-	-	-	-	-	-	-	-	-	B2
Benz(g,h,i)perylene (PAH)	-	-	-	-	-	-	-	-	-	-	D
Benz(k)fluoranthene (PAH)	-	-	-	-	-	-	-	-	-	-	B2
bis-2-Chloroisopropyl ether	-	-	-	F	4	4	4	13	0.04	1	D
Bromacil	L	-	-	F	5	5	3	0.13	5	0.09	C
Bromobenzene	L	-	-	D	-	-	-	-	-	-	-

*Under review.

**NOTE: The HA value or the MCLG/MCL value for any two or more of these three chemicals should remain at 0.007 mg/L because of similar mode of action.

***PAH = Polycyclic aromatic hydrocarbon

*See 40CFR Parts 141 and 142

NOTE: Anthracene and Benzo(g,h,i)perylene — not proposed in Phase V.

NOTE: Changes from the last version are noted in Italic and Bold Face print.

Drinking Water Standards and Health Advisories

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Chemical	Standards		Health Advisories						Current Group	
	Status Reg.	MCLa (mg/L)	MCL _{nt} (mg/L)	10-49 Child		70-49 Adult		Lifetime (mg/L)	Lifetime (mg/L) ^b	
				One-day (mg/L)	Ten-day (mg/L)	Long-term (mg/L)	Long-term (mg/L)			
Bromoacetonitrile	T	-	D	-	-	-	-	-	-	-
Bromochloromethane	P	zero	0.170.08*	F	0.1	0.1	0.1	0.013	0.04	B2
Bromodichloromethane (THM)	P	zero	0.170.08*	D	6	6	4	13	0.02	B2
Bromomethane	T	-	-	D	6	2	2	6	0.02	D
Buylbenzyl phthalate (PAE) ^c	-	-	-	F	0.1	0.1	0.1	0.5	0.001	C
Butylate	-	-	-	F	2	2	1	4	0.05	D
Butylbenzene (b)	-	-	-	D	-	-	-	-	-	-
Butylbenzene sec-	-	-	-	D	-	-	-	-	-	-
Butylbenzene tert-	-	-	-	D	-	-	-	-	-	-
Carbaril	-	-	F	1	1	1	1	0.1	4	D
Carboxylic acid	F	0.04	0.04	F	0.05	0.05	0.05	0.2	0.008	E
Carbon tetrachloride	F	zero	0.005	F	4	0.2	0.07	0.3	0.007	B2
Carbon	-	-	-	F	1	1	1	4	0.1	D
Chloral hydrate	P	0.04	0.06*	D	7	0.2	0.2	0.6	0.002	C
Chloranthen	-	-	-	F	3	3	0.2	0.6	0.015	D
Chordane	F	zero	0.002	F	0.08	0.08	-	-	0.0006	B2
Chlorodibromomethane (THM)	P	0.08	0.170.08*	D	6	8	2	8	0.02	C
Chloroethane	L	-	-	D	-	-	-	-	-	B
Chloroform (THM)	P	zero	0.170.08*	D	4	4	0.1	0.1	0.01	B2
Chlorothane	L	-	-	F	9	0.4	0.4	1	0.004	C
Chlorotetra (2)	-	-	-	D	6.4	6.4	2.4	6.002	0.04	D
p-Chlorophenyl methyl sulfide/sulfone/sulfoxide	-	-	-	-	-	-	-	-	-	D
Chloroethene	E	-	-	F	-	-	-	-	-	-
Chlorothalonil	-	-	-	F	0.2	0.2	0.2	0.5	0.015	B2
Chloroethylene	E	-	-	F	2	2	2	7	0.02	D
Chlorotoluene p-	L	-	-	F	2	2	2	7	0.02	D
Chloropropene	-	-	-	F	0.03	0.03	0.1	0.004	0.1	B2
Chrysene (PAH)	-	-	-	-	-	-	-	-	***	-
Cyanazine ^d	T	0.021	D	0.1	0.1	0.12	0.02	0.07	0.13***	C

* Current MCL. "A HA will not be developed due to insufficient data; a "Database Deficiency Report has been published.

** 1994 Proposed rule for Disinfectants and Disinfection By-products : Total for all THMs combined cannot exceed the 0.08 level.

*** PAE = phthalate acid ester **** Draft HA updated for the Phase VI B regulation, which has been postponed. It includes the change of the cancer classification from D to C, thus justifying the use of an additional 10-fold safety factor for the Lifetime HA.

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Chemical	Standards		Health Advisories						Cancer Group	
	Status Flag	MCL (mg/L)	10-4g CMR		70-4g Adult		Lifetime Dose (mg/L)	Lifetime Risk		
			HA	One-day (mg/L)	Ten-day (mg/L)	Longer- term (mg/L)				
Cyanogen chloride	T	-	D	-	-	-	-	-	-	
Chlorine p-	F	0.07	0.07	F	1	0.3	0.1	0.4	0.07	
2,4-D	L	-	F	80	5	20	0.5	20	D	
DCP A (Oxidizer)	F	0.2	0.2	F	3	3	0.3	0.9	D	
Dalapon	F	0.4	0.4	F	20	20	60	0.6	D	
Di(2-ethylhexyl)adipate	F	-	-	F	0.02	0.02	0.005	0.0009	C	
Diazinon	L	-	D	2	2	2	0.12	0.02	E	
Dioxane, acetone	F	zero	0.0002	F	0.2	0.05	-	-	C	
Dibromochloropropane (DBCP)	L	-	-	-	-	-	-	-	B2	
Dibutyl phthalate (DBP)	-	-	-	-	-	-	-	-	D	
Dicarbonyl	L	-	-	F	0.3	0.3	1	0.14	B	
Dichloroacetaldehyde	L	-	D	-	-	-	-	-	B2	
Dichloroacetic acid	P	zero	0.004	D	1	1	1	0.004	C	
Dichloroacetonitrile	L	-	D	1	1	0.8	3	0.006	B	
Dichlorodiphenyl	F	0.6	0.6	F	10	5	30	0.08	D	
Dichlorobenzene m-*	-	-	F	0	0	9	30	0.09	C	
Dichlorobenzene p-	F	0.076	0.076	F	10	10	40	0.1	B2	
Dichlorodifluoromethane	L	-	F	40	40	9	30	0.2	D	
Dichloroethane (1,2)	F	zero	0.006	F	0.77	0.77	0.7	2.6	B2	
Dichloroethylene (1,1-)	F	0.007	0.007	F	2	1	1	0.008	C	
Dichloroethylene (cis-1,2-)	F	0.07	0.07	F	4	3	3	0.01	B	
Dichloroethylene (trans-1,2-)	F	0.1	0.1	F	20	2	6	0.02	D	
Dichromate	F	zero	0.004	F	10	2	-	0.04	B2	
Dichlorophenol (2,4-)	-	-	D	0.03	0.03	0.03	0.1	0.02	D	
Dichloropropene (1,1-)	-	-	D	-	-	-	-	-	B2	
Dichloropropane (1,2-)	F	zero	0.005	F	-	0.09	-	-	0.06	
Dichlorotoluene (1,3-)	L	-	D	-	-	-	-	-	B2	

* The values for m-dichlorobenzene are based on data for o-dichlorobenzene.

** A quantitative risk estimate has not been determined.

.. Total for all halocarboxylic acids cannot exceed 0.06 level.

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Chemical	Standards			Health Advisories						Cancer Group		
	Status	MCL Prop. (mg/L)	MCL (mg/L)	HA	Status	10-kg CMR	One-day (mg/L)	Long-term (mg/L)	RIO (mg/L day)	Long-term (mg/L)	Lifetime (mg/L)	multiplier for Cancer Risk
Dichloropropane (2,2,1)	L	-	-	D	D	-	-	-	-	-	-	-
Dichloropropene (1,1,1)	T	zero	-	F	0.03	0.03	0.03	0.08	0.0003	0.01	-	0.02
Dichloroethane	-	-	-	F	0.0065	0.0065	-	0.002	0.0006	0.0012	-	B2
Diethyl phthalate (PAE)	-	-	-	D	-	-	-	-	0.6	30	5	-
Diethyl glycol acetate	-	-	-	S	-	-	-	-	-	-	-	D
Di(2-ethylhexyl)phthalate (PAE)	F	zero	0.006	D	-	-	-	0.02	0.7	-	0.3	B2
Diisopropyl isobutylphosphonite	-	-	-	F	8	8	8	30	0.08	3	0.8	-
Dimethulin	-	-	-	F	10	10	10	40	0.3	10	2	-
Dimethyl methylphosphonate	-	-	-	F	2	2	2	6	0.2	7	11	-
Dimethyl phthalate (PAE)	-	-	-	F	0.04	0.04	0.04	0.14	0.0003	0.0001	-	C
1,3-Dinitrobenzene	L	-	-	F	0.50	0.50	0.30	1	0.022	0.1	-	D
Dinitrotoluene (2,4)	L	-	-	F	0.40	0.40	0.40	1	0.011	0.04	-	B2
Dinitrotoluene (2,3)	-	-	-	-	-	-	-	-	-	-	-	B2
tg 2,6 & 2,4 dinitrotoluene **	-	-	-	-	-	-	-	-	-	-	-	B2
Dinitroab	F	0.007	F	0.3	0.3	0.01	0.04	0.001	0.004	0.007	0.007	D
Dioxane P-	-	-	-	F	4	0.4	-	-	-	-	0.7	B2
Dithiodicarb	-	-	-	F	0.3	0.3	0.3	1	0.03	0.2	-	D
Diphenylamine	-	-	-	F	1	0.3	1	0.03	1	0.2	-	D
Dieldrin	F	0.02	0.02	F	2	2	2	6	0.002	0.08	0.02	-
Disulfoton	-	-	-	F	0.01	0.01	0.003	0.009	0.0004	0.001	0.0003	E
Dioxane (1,4)	-	-	-	F	0.4	0.4	0.4	1	0.01	0.4	0.06	D
Diuron	-	-	-	F	1	1	0.3	0.9	0.002	0.07	0.01	D
Endosulfan	F	0.1	0.1	F	0.8	0.8	0.2	0.2	0.02	0.7	0.1	D
Endrin	F	0.002	0.002	F	0.02	0.02	0.003	0.01	0.0003	0.01	0.002	D
Epenchlorohydrin	F	zero	11	F	0.1	0.1	0.07	0.07	0.002	0.07	0.1	B2
Ethylenbenzene	F	0.7	0.7	F	30	3	1	3	0.1	3	0.7	-
Ethylenediamine (EDB)	F	zero	0.0003	F	20	6	6	20	2	40	7	-
Ethylene glycol	-	-	-	F	0.3	0.3	0.1	0.4	0.0004	0.003	-	D
ETU	-	-	-	F	0.009	0.009	0.005	0.02	0.00025	0.009	0.002	B2
Fenamiphos	-	-	-	-	-	-	-	-	-	-	-	D

* An HA will not be developed due to insufficient data. ** "Database Deficiency Report" has been published.

** tg = technical grade

Drinking Water Standards and Health Advisories

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Chemical	Standard		10-kg Child				70-kg Adult				Health Advisory		Carcinogen Group
	Status Flag	MCL (mg/l)	HA	One-day (mg/l)	Ten-day (mg/l)	Longer term (mg/l)	RM (mg/kg day)	DRL (mg/l)	Lifetime (mg/l)	mg/l at 10^4 mg/m ³	Cancer Risk		
Fluorine	-	-	F	2	2	2	5	0.013	0.4	0.05	-	D	
Fluorene (PAH)	-	-	-	-	-	-	-	0.04	-	-	-	D	
Fluorotrichloromethane	L	-	F	7	7	3	10	0.3	10	2	-	D	
Fog Oil	-	-	D	-	-	-	-	-	-	-	-	-	
Formaldehyde	D	-	D	0.02	0.02	0.02	0.07	0.012	0.07	0.01	0.01	B1**	
Gemaine (benzene)	-	-	D	10	5	5	20	0.15	5	1	-	-	
Glyphosate	F	0.7	F	20	20	1	1	0.1	4	0.7	-	E	
Haplo-2D	F	zero	F	0.01	0.01	0.005	0.005	0.005	0.02	0.0006	B2	B2	
Heptachlor epoxide	F	zero	F	0.002	F	0.01	0.001	0.001	1E-5	0.0004	-	B2	
Heptachlorobutadiene	F	zero	F	0.001	F	0.005	0.005	0.02	0.0004	0.002	B2	B2	
Hexachlorobutadiene	T	0.001	-	F	0.3	0.3	0.1	0.4	0.002	0.07	0.001	C	
Hexachloroethane	F	0.06	-	F	-	-	-	0.037	0.2	-	-	D	
Heptachloroethane	L	-	F	5	5	0.1	0.5	0.001	0.04	0.001	-	C	
Heptane (n-)	-	-	F	10	4	4	10	-	-	-	-	D	
Hexazinone	-	-	F	3	3	3	8	0.033*	1*	0.2*	-	C	
HMX	-	-	F	5	6	6	20	0.05	2	0.4	-***	B2	
Indeno(1,2,3-c,d)pyrene (PAH)	-	-	D	-	-	-	-	-	-	-	-	C	
Isophorone	L	-	F	15	15	15	15	0.2	7	0.1	-	D	
Isopropyl methylphosphonate	-	-	D	30	30	30	100	0.1	4.0	0.7	-	D	
Isopropylbenzene	-	-	D	-	-	-	-	-	-	-	-	E	
Lindane	F	0.0002	F	1	1	0.03	0.1	0.0003	0.01	0.0002	-	C	
Makstion	-	-	F	0.2	0.2	0.2	0.8	0.02	0.8	0.2	-	D	
Maleic hydrazide	-	-	F	10	10	5	20	0.5	20	4	-	D	
MCPA	-	-	F	0.1	0.1	0.1	0.4	0.0016	0.05	0.01	-	E	
Methomyl	L	-	F	0.3	0.3	0.3	0.3	0.025	0.9	0.2	-	D	
Methoxychlor	F	0.04	F	0.05	0.05	0.05	0.2	0.008	0.2	0.04	-	D	
Methyl ethyl ketone	-	-	F	-	-	-	-	-	-	-	-	-	
Methyl parathion	-	-	F	0.3	0.3	0.03	0.1	0.002	0.004	0.002	-	D	

* Under review.

** Carcinogenicity based on inhalation exposure.

*** See 40 CFR Parts 141 and 142

Drinking Water Standards and Health Advisories

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Page 6

Chemical	Standards			Health Advisories										Cancer Group	
	Status	MCL (mg/L)	MCL [mg/L]	10-40 Child		70-90 Adult		Lifetime		Dose		Risk			
				HA	1-day [mg/L]	1-year [mg/L]	1-year [mg/L]	Long-term [mg/L]	Short-term [mg/L]	mg/kg/day	mg/kg/day	Lifetime [mg/L]	mg/L		
Methyl tert butyl ether	L	-	-	D	24	24	3	12	0.03	1.0	0.02-0.2*	-	-	C***	
Methacrylate	L	-	-	F	1	1	1	0.0	0.1	0.0	0.0	0.0	0.0	C	
Methibuzin	L	-	-	F	5	5	0.3	0.5	0.013**	0.5	0.1	-	-	D	
Monochloroacetic acid	L	-	-	D	-	-	-	-	-	-	-	-	-	B	
Monochlorobenzene	F	0.1	0.1	F	2	2	2	7	0.02	0.7	0.1	-	-	D	
Negligible	-	-	-	F	0.5	0.5	0.4	1	0.004	0.1	0.02	-	-	B	
Nitrocellulose (non-toxic)	-	-	-	F	-	-	-	-	-	-	-	-	-	B	
Nitroglycerine	-	-	-	F	10	10	10	40	0.1	4	0.7	-	-	D	
Nitrophenol p-	-	-	-	F	0.8	0.8	0.8	3	0.008	0.3	0.08	-	-	D	
Oxymp (Nydrin)	F	0.2	0.2	F	0.2	0.2	0.2	0.8	0.026	0.8	0.2	-	-	E	
Percquat	-	-	-	F	0.1	0.1	0.05	0.2	0.0045	0.2	0.03	-	-	E	
Pentachloroethane	-	-	-	D	-	-	-	-	-	-	-	-	-	D	
Pentaclorophenol	F	zero	0.001	F	1	0.3	0.3	1	0.03	1	-	-	0.03	B2	
Phenanthrene (PAH)	-	-	-	D	-	-	-	-	-	-	-	-	-	D	
Phend	-	-	-	F	6	6	6	20	0.6	20	4	-	-	D	
Phluorin	F	0.5	0.6	F	20	20	0.7	2	0.07	2	0.6	-	-	D	
Polychlorinated biphenyls (PCBs)	F	zero	0.0005	P	-	-	-	-	-	-	-	-	0.0005	B2	
Plastisol	L	-	-	F	0.2	0.2	0.2	0.5	0.015*	0.5	0.11	-	-	D	
Pramamide	-	-	-	F	0.8	0.8	0.8	3	0.075	3	0.05	-	-	C	
Propachlor	-	-	-	F	0.5	0.5	0.1	0.5	0.013	0.5	0.04	-	-	D	
Propazine	-	-	-	F	1	1	0.5	2	0.02	0.7	0.01	-	-	C	
Propiconazol	-	-	-	F	6	6	6	20	0.02	0.6	0.1	-	-	C	
Propylbenzene n-	-	-	-	D	-	-	-	-	-	-	-	-	-	B	
Phene (PAH)	-	-	-	F	-	-	-	-	0.03	-	-	-	-	B	
RDX	-	-	-	F	0.1	0.1	0.1	0.4	0.003	0.1	0.002	0.03	C		
Simezine	F	0.004	0.004	F	0.07	0.07	0.07	0.005	0.005	0.2	0.004	-	-	C	
Styrene	F	0.1	0.1	F	20	2	2	7	0.2	7	0.1	-	-	C	
2,4,5-t	L	-	-	F	0.6	0.6	0.8	1	0.01	0.45	0.07	-	-	D	
2,3,7,8-TCDD (Dioxin)	F	zero	3E-08	F	1E-08	1E-07	1E-08	4E-08	1E-08	4E-08	-	2E-08	B2	B2	

* Under review. NOTE: Phenanthrene — not proposed.

** The RfD for metribuzin was revised Dec. 1994 to 0.013 mg/kg/day. Based on this revised RfD the Lifetime HA would be 0.1 mg/L assuming a 20% relative source contribution for drinking water. This information has not been incorporated in the Health Advisory document.

*** Tentative.

If the cancer classification C is accepted, the Lifetime HA is 0.20; otherwise it is 0.200 mg/L.

Drinking Water Standards and Health Advisories

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Chemical	Standards				Health Advisories						Cancer Group
	Status Reg.	NCI-C (mg/m³)	NCI-L (mg/m³)	Status HA	10-kg Child		70-kg Adult		Lifetime		
					One-day (mg/m³)	Ten-day (mg/m³)	Longer-term (mg/m³)	HA (mg/m³/day)	DWEL (mg/m³)	Lifetime (mg/m³)	
Tetrahydrofuran	-	-	-	F	3	3	0.7	2	0.07	2	D
Tereftal	-	-	-	F	0.3	0.3	0.3	0.9	0.013	0.4	E
Terbufos	-	-	-	F	0.005	0.005	0.001	0.005	0.0013	0.005	D
Tetrachloroethane (1,1,1,2)	L	-	-	F	2	2	0.8	3	0.03	1	C
Tetrachloroethylene	L	-	-	D	-	-	-	-	-	-	-
Tetranitromethane	F	200	0.005	F	2	2	1	5	0.01	0.6	D
Toluene	-	-	-	-	-	-	-	-	-	-	-
Toxaphene	F	1	1	F	20	2	2	7	0.2	7	B
2,4,5-TP	F	0.05	0.05	F	-	-	-	-	-	-	B2
1,1,2-Trichloro-1,2,2-trifluoroethane	-	-	-	-	-	-	-	-	-	-	D
Trichloroacetic acid	P	0.3	0.06*	D	4	4	4	15	0.1	40	C
Trichloroacetonitrile	L	-	-	D	0.05	0.05	-	-	-	-	-
Trichlorobenzene (1,2,4)	F	0.07	0.07	F	0.1	0.1	0.1	0.8	0.011	0.04	B7
Trichlorobenzene (1,3,5)	-	-	-	F	0.6	0.6	0.6	2	0.006	0.2	D
Trichloroethane (1,1,1)	F	0.2	0.2	F	10	40	40	100	0.035	1	B
Trichloroethane (1,1,2)	F	0.003	0.005	F	0.6	0.4	0.4	1	0.004	0.1	C
Trichloroethane (2,2,2)	L	-	-	D	-	-	-	-	-	-	-
Trichloroethylene	F	zero	0.005	F	-	-	-	-	-	-	-
Trichloropand (2,4,B)	L	-	-	D	-	-	-	-	-	-	B2
Trichloropropane (1,1,1)	-	-	-	D	-	-	-	-	-	-	B2
Trichloropropane (1,2,3)	L	-	-	F	0.6	0.6	0.6	2	0.006	0.2	B2
Trifluralin	-	-	-	F	0.08	0.08	0.08	0.3	0.0075	0.3	C
Trimethylbenzene (1,2,4)	-	-	-	D	-	-	-	-	-	-	-
Trimethylbenzene (1,3,5)	-	-	-	F	0.006	0.006	0.006	0.02	0.0005	0.02	C
Trifluoracetyl	-	-	-	F	0.02	0.02	0.02	0.02	0.0005	0.02	0.1
Vinyl chloride	F	zero	0.002	F	3	3	0.01	0.005	-	-	A
Xylenes	F	10	10	F	40	40	100	2	60	10	D

* Under review.

** A HA will not be developed due to insufficient data; * "Database Deficiency Report" has been published.

** Total for all haloacetic acids cannot exceed 0.06 mg/l level.

Drinking Water Standards and Health Advisories

Chemical	Standards				Health Advisories				Cancer Group
	Status Reg.	MCL (mg/L)	MCL HA (mg/L)	Status HA	10-4 CLinst	Long-term health risk (mg/L)	Short-term health risk (mg/L)	Health advisory (mg/L)	
INORGANICS									
Aluminum	L	-	-	D	-	-	-	-	D
Antimony	F	0.008	0.008	F	0.01	0.01	0.015	0.0004	D
Arsenic	F	0.05	0.05	D	-	-	-	-	D
Asbestos (fibers 1 >10 µm length)	F	7 MFL	7 MFL	-	-	-	-	-	A
Barium	F	2	2	F	-	-	-	-	D
Beryllium	F	0.004	0.004	D	30	30	20	0.005	B2
Boron	F	-	-	D	4	0.8	0.1	-	D
Bromate	L	zero	0.01	-	-	-	-	-	-
Cadmium	F	0.005	0.005	F	0.04	0.04	0.005	0.005	B2
Chloramine	P	4***	4	D	1	1	1	0.1	-
Chlorine	P	4	4	D	-	-	-	0.1	D
Chloride	F	0.3	0.6	D	-	-	-	0.01	B
Chlorite	L	0.08	1	D	-	-	-	0.03	D
Chromium (total)	F	0.1	0.1	F	1	1	0.2	0.005	D
Copper (at tap)	F	1.3	TT**	-	-	-	-	-	D
Cyanide	F	0.2	0.2	F	0.2	0.2	0.2	0.022	D
Fluoride*	F	4	4	-	-	-	-	0.12	-
Hypochlorite	P	4	-	D	-	-	-	-	-
Hypochlorous acid	P	4	-	D	-	-	-	-	-
Lead (at tap)	F	zero	TT**	-	-	-	-	-	B2
Manganese	L	-	-	D	-	-	-	0.14 ⁴	-
Mercury (methylated)	F	0.012	0.012	F	-	-	-	0.003	D
Molybdenum	L	-	-	D	0.02	0.02	0.01	0.05	D
Nickel	F	0.1*	0.1*	F	1	1	0.5	0.02	D
Nitrate (as N)	F	10	10	F	-	10*	-	1.6	-

* Under review.

** Copper — action level 1.3 mg/l, Lead — action level 0.015 mg/l.

*** Measured as free chlorine.

1 Regulated as chlorine.

2 In food.

3 In water.

4 Being remanded

Drinking Water Standards and Health Advisories

Chemicals	Standards				10-40 Child				Health Advisories				Cancer Group	
	Status Reg.	MCLG (mg/L)	MCL (mg/L)	Status NA	One-day		Ten-day		Longer-term		Health Advisories			
					(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)		
Nitrite (as N)	F	1	1	F	-	-	1*	-	-	0.16*	-	-	-	
Nitrate + Nitrite (both as N)	F	10	10	F	-	-	-	-	-	-	-	-	-	
Selenium	F	0.05	0.05	-	-	0.2	0.2	0.2	0.2	0.05	0.2	0.1	D	
Silver	-	-	-	D	-	-	-	-	-	-	-	-	D	
Sodium	-	-	-	D	-	-	-	-	-	-	-	-	D	
Samarium	L	-	-	D	25	25	25	25	30	0.8	0.8	17	D	
Sulfate	P	500	500	D	-	-	-	-	-	-	-	-	-	
Thallium	F	0.0005	0.002	F	0.007	0.007	0.007	0.007	0.007	0.002	0.004	-	-	
Vanadium	T	-	-	D	-	-	-	-	-	-	-	-	D	
White phosphorus	-	-	-	F	-	-	-	-	-	-	-	-	D	
Zinc	L	-	-	F	6	6	3	10	0.3	10	2	-	D	
Zinc chloride (manganous zinc)	L	-	-	F	6	6	3	10	0.3	10	2	-	D	
RADIONUCLIDES														
Beta particle and photon activity (formerly fast-neutron radionuclides)	F	zero	4 mrem	-	-	-	-	-	-	-	-	-	A	
Gross alpha particle activity	F	zero	15 PCU/L	-	-	-	-	-	-	-	-	-	A	
Combined Radon 222 & 226	F	zero	6 PCU/L	-	-	-	-	-	-	-	-	-	A	
Radon	P	zero	300 PCU/L	-	-	-	-	-	-	-	-	-	A	
Uranium	P	zero	20 PCU/L	-	-	-	-	-	-	-	-	-	A	

* Under review. ** Guidance.

+1991 Proposed National Primary Drinking Water Rule for Radionuclides

Secondary Maximum Contaminant Levels

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Chemicals	Status	SMCL₃ (mg/L)
Aluminum	F	0.05 to 0.2
Chloride	F	260
Color	F	15 color units
Copper	F	1.0
Corrosivity	F	non-corrosive
Fluoride*	F	2.0
Foaming agents	F	0.5
Iron	F	0.3
Manganese	F	0.05
Odor	F	3 threshold odor numbers
pH	F	6.5 — 8.5
Silver	F	0.1
Sulfate	F	250
Total dissolved solids (TDS)	F	500
Zinc	F	5

Status Codes: P — proposed, F — final

* Under review.

Microbiology

November 1995

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	Status	W.C.G	MCL
Cryptosporidium	L	-	-
<i>Giardia lamblia</i>	F	zero	TT
Legionella	F*	zero	TT
Standard Plate Count	F*	NA	TT
Total Coliforms	F	zero	**
Turbidity	F	NA	PS
Viruses	F*	zero	TT

Key: PS, TT, F, defined as previously stated.

- * Final for systems using surface water; also being considered for regulation under groundwater disinfection rule.

11/95 EPA Health Advis.

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D-241 Health Advisory - Metolechler	2.25
D-242 Health Advisory - Metributrin	2.25
D-243 Health Advisory - Parquat	2.25
D-244 Health Advisory - Picloram	2.00
D-245 Health Advisory - Prometon	1.75
D-246 Health Advisory - Promamide	2.25
D-247 Health Advisory - Propachlor	2.00
D-248 Health Advisory - Propazine	2.00
D-249 Health Advisory - Propham	2.00
D-250 Health Advisory - Simazine	2.75
D-251 Health Advisory - 2, 4, 5 - Trichlorophenoxyacetic Acid	1.00
D-252 Health Advisory - Tebuthiuron	2.00
D-253 Health Advisory - Turbostar	2.25
D-254 Health Advisory - Trifluradin	2.75
D-255 Health Advisory - Alachlor	2.00
D-256 Health Advisory - Aldicarb (Sulfone and Sulfoxide)	2.25
D-257 Health Advisory - Carbaryl	2.00
D-258 Health Advisory - Chlordane	2.50

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D-259 Health Advisory - 1, 2 - Di bromo - 3 - Chloropropane (DBCP)	2.75
D-260 Health Advisory - 1, 2 - Dichloropropane Acid	1.75
D-261 Health Advisory - 1, 2 - Dichloropropane	2.50
D-262 Health Advisory - Ethylene Dibromide	2.50
D-263 Health Advisory - Endrin	2.25
D-264 Health Advisory - Heptachlor and Heptachlor Epsilonide	2.50
D-265 Health Advisory - Lindane	2.25
D-266 Health Advisory - Methoxychlor	2.00
D-267 Health Advisory - Quatsyl	1.50
D-268 Health Advisory - Pentachlorophenol	2.00
D-269 Health Advisory - Toxaphene	1.75
D-270 Health Advisory - Trichlorophenoxyacetic Acid Microbiological	3.00
D-271 Health Advisory - Legionella - Control of in Plumbing Systems (part of the microbiological health advisory group)	1.75
D-272 Health Advisory - Aldrin	3.00
D-273 Health Advisory - Anthonia	1.75
D-274 Health Advisory - Anthomy	3.50
D-275 Health Advisory - Benzilium	3.00
D-276 Health Advisory - Boron	3.00

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D-294	Health Advisory - Dichlorodifluromethane
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D-310	Nitrate Health Advisory (Interim Draft) 1.75 7/95
D-311	Health Advisory • Nitrate/Nitrite 2.25
D-312	Health Advisory • Octahydronaphthalene Dinitrate (OHDN) • Date Deficiencies, Problem Areas, and Recommendations for Additional Database Development for 10.50

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D-314	Health Advisory - Dimethyl Methylphosphonate (DMMP)	9.25	D-428	Carbon Tetrachloride Health Advisory	2.25
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D-317	Health Advisory - Diphenylamine (DPA)	11.25	D-431	1, 2-Dichloroethane Health Advisory	2.25
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D-319	Health Advisory - Hexachloroethane	9.50	D-433	ClS-1, 2-Dichloroethylene Health Advisory	2.25
D-320	Health Advisory - Hexahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (RDX)	12.00	D-434	Trans-1, 2-Dichloroethylene Health Advisory	2.25
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D-324	Health Advisory - Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	7.25	D-438	Hexachlorobutene Health Advisory	2.25
D-325	Health Advisory - p-Chlorophenyl Methyl Sulfide, -Sulfide, and -Sulfone (PCPMs, PCPSOs, and PCPSOS) - Data Deficiencies, Problem Areas, and	8.50	D-439	m-Hexane Health Advisory	2.25
D-326	Health Advisory - Tetraalkylmethane (TMH) - Data Deficiencies, Problem Areas, and Recommendations for Additional Database Development for	5.50	D-440	Methyl Ethyl Ketone Health Advisory	2.25
D-327	Health Advisory - Trinitroglycerol	10.25	D-441	Styrene Health Advisory	2.25
D-328	Health Advisory - Trinitrotoluene	14.50	D-442	2,3,7,8-Tetrachlorodibenz-p-Dioxin Health Advisory	2.50
D-329	Health Advisory - White Phosphorus Office of Ground Water and Drinking Water Documents	9.25	D-443	Tetrachloroethylene (PCE) Health Advisory	2.25
D-326	Acrylonitrile Health Advisory	2.25	D-444	Toluene Health Advisory	2.25

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11.35

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D-446	Trichloroethylene Health Advisory				2.50	
D-447	Vinyl Chloride Health Advisory				2.25	
D-448	Xylenes Health Advisory				2.25	
D-171 822/K-94-001	Cryptosporidium Health Advisory (part of the microbiological health advisory group)				3.50 1994	
G-364	National Survey of Pesticides in Drinking Water: Health Advisory Summaries				13.25	
D-060	Methyl-t-Butyl Ether Drinking Water Health Advisory (Draft)				3.50 Jan-92	
D-A10	Methyl-t-Ethyl Ether Drinking Water Health Advisory (Draft)				3.50 Jan-92	
G-045	Zinc Health Advisory (Draft)				4.50 Dec-90	
						35.25

Total charge: \$495.50

